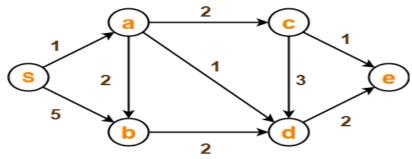
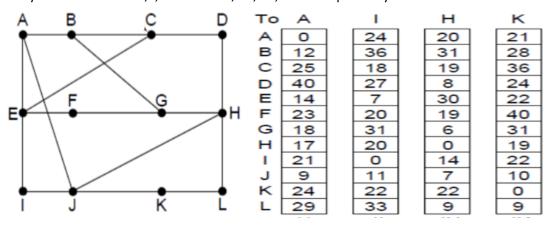
Question Bank for Term Test 2

Chapter 4: Network Layer

- 1. Explain in detail the different classes of IPv4 addresses.
- 2. Compare and contrast: Virtual Circuits Vs Datagram Networks.
- 3. The address in the block is given as 73.25.16.27. Find the number of addresses in the block, the first address, and the last address.
- 4. Explain the concept of subnetting and masking.
- 5. One of the addresses in the block is 167.199.170.82/27. Find the number of addresses in the network, the first address, and the last address.
- 6. An organization is granted the block 130.34.12.64/26. The organization needs four subnetworks, each with an equal number of hosts. Design the subnetworks and find the information about each network.
- 7. Explain IPv4 Datagram Header in detail.
- 8. Explain Network Address Translation (NAT) with its types and example.
- 9. Using Dijkstra's Algorithm, find the shortest distance from source vertex 'S' to remaining vertices in the following graph.



10. Consider the following network given below. The routing table for router A, I, H and K is also given. Using Distance Vector Routing, construct the optimal routing table for Router J. The delay from router J to A, I, H and K is 8, 10, 12, and 6 respectively.



Chapter 5: Transport Layer

- 1. Explain in detail the services offered by Transport Layer.
- 2. Explain the features of UDP and also explain UDP Header in detail.
- 3. The following is a dump of a UDP header in hexadecimal form:

06 32 00 0D 00 1C E2 17

What is the

- (a) Source port number
- (b) Destination port number
- (c) Total length of the UDP
- (d) Length of the data
- 4. Explain TCP Segment Header in detail with a neat diagram.
- 5. The following is a dump of a TCP header in hexadecimal format: 00CD0018 00000EF1 00000D5D 502200D1 01BF0010
 - (a) What is the source port number?
 - (b) What is the destination port number?
 - (c) What is the sequence number?
 - (d) What is the acknowledgment number?
 - (e) What is the length of the header?
 - (f) What is the type of segment?
 - (g) What is the window size?
- 6. Compare TCP and UDP.
- 7. Explain different types of TCP Timers.
- 8. Explain Berkeley Sockets in detail.

Chapter 6: Application Layer

- 1. Explain Domain Name System (DNS) in detail.
- 2. Write a short note on: SMTP Protocol
- 3. Write a short note on: Telnet
- 4. Write a short note on: DHCP Protocol